

SECTION - B SHORT QUESTION

Q-2 Define Median and give its merits and demerits.

Q-3. Find the square root of

$$\left(x + \frac{1}{x} \right)^2 - 4 \left(x - \frac{1}{x} \right)$$

Q-4. Prove that $\frac{1}{1 + \sin \theta} + \frac{1}{1 - \sin \theta} = 2 \sec^2 \theta$

Q-5. simplify $\frac{(27)^{\frac{2n}{3}} \times (8)^{-\frac{n}{3}}}{(18)^{-\frac{n}{2}}}$

Q-6. Define any two of the following and draw the figure.
Trapezoid. Circum circle of a triangle. Adjacent Angles.

Q-7. Find the H.C.F of the polynomials by division method.
 $4x^3 - 3x^2 - 24x - 9$ and $8x^3 - 2x^2 - 53x - 39$.

Q-8. if $A = \{a, b\}$, $B = \{2, 3\}$ and $C = \{3, 4\}$, then find $A \times (B - C)$ and $A \times (B \cap C)$

Q-9. Prove that $\log_b m = \log_a m \cdot \log_b a$

Q-10. Find the value of $x^3 + y^3$ when $x + y = -5$ and $xy = 8$.

Q-11. Two numbers are in the ratio 7:8 and their sum is 105. Find the number.

Q-12: Solved the equations by using Cramer's rule. $2x + 5y = 9$, $4x - 2y = 1$

Q-13: Prove that, if a perpendicular is drawn from the centre of a circle to a chord, it bisects the chord

Q-14: Eliminate x from the equation. $x + \frac{1}{x} = 2p$, $x - \frac{1}{x} = 2q + 1$

Q-15: Solve the equation by completing square: $2x^2 + 10x - 48 = 0$